



## **D2.2 FIRST REPORT ON MODULAR ARCHITECTURE, PROTOCOLS AND APIs**



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<b>Abstract</b>	This deliverable represents the initial architecture that will govern the overall design and deliverables associated with the PRESENT project. The goal is to provide a high level overview of the various components required to deliver the overall functionality.
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v1.1	27/2/2020	Revised and improved based on partner feedback.
v1.2	1/3/2020	Added Use Cases
v1.3	3/3/2020	Q2 Meeting Draft
v2.0	16/3/2020	Report Release
v2.1	18/3/2020	Final version: <i>Due to the COVID19 situation, it has been necessary to carry out the document review and adjustment process without the participation of the deliverable leader. Thanks to the very well structured information and organization of the document, and being it almost ready to deliver, this fact has not really affected the final result. For this final version, alternative contact is <a href="mailto:jmontesa@brainstorm3d.com">jmontesa@brainstorm3d.com</a></i>

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# 1. EXECUTIVE SUMMARY

This document represents the initial architecture that will govern the overall design and deliverables associated with the ICT25 PRESENT project. The goal is to provide a high level overview of the various components required to deliver the overall functionality.

The project architecture reported here has been guided by

- i. The Architectural Review Board (ARB) which has been meeting regularly through the first two quarters of the project.
- ii. Discussions in the quarterly project meetings attended in person by all partners.
- iii. Meetings between individual partners and Framestore (FS) as the partner responsible for the drafting of this document.

As defined at the grant proposal stage, a modular architecture has been pursued with 'Inputs' and 'Outputs' clearly defined and separated. Further, the design has been split into Components and Applications, establishing the separation between the functional components and the integration projects bringing these components together to create the use cases.

Complementary to this deliverable, work will be undertaken by Framestore in the 3rd quarter to create a reference implementation in Unreal Engine, defining and prototyping the interfaces outlined in this document. This will provide a reference platform against which i) all input components can be tested and validated and ii) provides a template for the integration projects.

As part of ongoing discussions, gaps have been identified in the overall system. These gaps are identified in this report and discussion is given to the current strategies and plans to mitigate / manage these. As virtual human interaction is a very active field of research, it is expected that over the 3 year cycle of this project, there will be many advances in the field. It is therefore expected that some of the gaps identified in the overall architecture may well be filled by open source third parties. The modular architecture presented here plays to these strengths as components can be interchanged either globally within the system or for specific use cases.